



Thanks to the internet, we don't have to face crowds, queues and bad weather to get a retail fix, but how are goods and services paid for? Paul Wardley explains the payment systems and schemes behind online shopping

To millions of users, the internet is an ever-changing display window on a discount warehouse of unbelievable size – a sort of super shopping channel for the computer literate. Even if you prefer to use the web for its original intention, as a means of sharing and disseminating information, you'll probably have bought a book from Amazon or some groceries from Tesco Direct.

But have you ever wondered what happens when you hit that Checkout button? The process can seem to differ greatly from retailer to retailer. Perhaps you enter your credit card details, and in the process you may be transferred to what seems like another site entirely. Maybe you are asked to use PayPal, or perhaps you've seen advertisements or heard about other types of payment schemes. We'll look at all the most common types of payment systems you're likely to come across, how they're used, and their advantages and disadvantages.

PAYING DIRECT

Direct payments are those made from credit and debit cards or by online transfer from a bank account. Most current accounts can now be managed online, making it possible to transfer money to anyone, provided you know their account number. While this is a viable means of paying for goods and services already tendered, it's not generally suitable for online

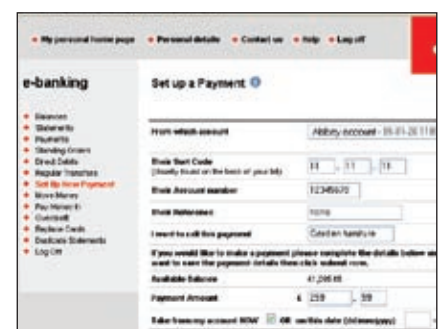
purchases because the transfer of funds is not usually instantaneous. However, on the plus side, no charges are incurred by either party, so this type of transfer might well be considered appropriate if you're buying a high-value item from an individual through an online auction site.

When ordering goods from a merchant trader using a debit or credit card, the transaction can be completed within seconds and the order processed swiftly, often in time for next-day delivery. From the seller's point of view a debit card is preferable because it costs less to process, but for buyers a credit card is by far the better choice. Not only does it offer an interest-free period before having to pay anything, it also provides more protection against something going wrong with the sale, such as goods not arriving or the seller going bust.

In case of disputes, and provided the value of a credit card transaction is between £100 and £30,000, you have equal rights to claim against the credit card issuer and the supplier. These statutory rights are laid out in Section 75 of the Consumer Credit Act of 1974 and derive from the fact that in paying by credit card you have entered into a contract with both the supplier and the card issuer. Although it is customary in the first instance to make claims against the supplier, you may choose to claim directly from the card issuer.

When debit card purchases have gone awry, you are not left completely adrift. You can ask your bank to make a chargeback on the transaction, which involves your bank claiming a refund from the bank of the merchant who sold you the defective or non-delivered goods. A chargeback is not an automatic right, but most issuers of Visa and MasterCard debit cards will instigate one for you. Claims must be made within 120 days and generally take far longer to process than simple credit card refunds.

Online transactions are 15 times more likely to be charged back than face-to-face transactions, and the cost of chargebacks has traditionally fallen on the online merchant, which is why two schemes are being introduced



▲ It can take four or five days to complete a direct transfer between bank accounts



▲ Most, but not yet all, banks in the United Kingdom are geared up to implement Verified by Visa transactions

to protect merchants against these charges: Verified by Visa and MasterCard SecureCode. You've probably already seen logos for one or both of these when buying from an online retailer. Online vendors who have signed up to these schemes divert their customers to a special screen during the checkout process, on which the customer is invited to join the appropriate scheme. Customers who choose to sign up are asked to create their own password, which in future is requested whenever they buy online from traders participating in the scheme.

Merchants gain by signing up to these schemes because it indemnifies them against chargebacks. Buyers gain because once they have signed up, their cards cannot be used to buy goods from participating traders without a password. Even if a fraudster has had sight of both the card number and the three-digit security number on the back, they won't be able to use the card to buy from traders within the scheme, as they won't have the password. Although the card could still be used to make purchases from non-enrolled traders, some protection is better than none. To use either scheme your card issuer needs to support it. You can check support and sign up online at www.visaeurope.com or www.mastercard.com.

AUCTION PAYMENT SYSTEMS

Payment systems for online auction sites combine facilities for the movement of money with tools that make it easier to create invoices, keep track of past and present auctions and make refunds. The most widely used payment mechanism for online auctions is PayPal (www.paypal.co.uk). Although it is part of eBay, it can be used on any auction site or to pay for non-auction transactions. A growing number of merchant traders are also starting to offer it as a payment option on commercial websites.

As a PayPal member, when you buy an auction item on eBay and choose PayPal as the means of payment, you are transferred to PayPal's website where most of the relevant information regarding the transaction is filled in for you. Just provide your username and password, and the appropriate amount is transferred from your PayPal account to the seller's PayPal account. If there are insufficient or zero funds in your account, the money is taken from a designated credit card, which is linked to the account at the time of setting it up. In this way, you never have to reveal your credit card number to anybody with whom you trade.

Making payments is free, but sellers are charged a commission of 3.4 per cent plus a service charge of 20p per transaction. Sellers are required to link a bank account to their PayPal account so that funds can be transferred in and

Depth perception Near Field Communication

Near Field Communication (NFC) is a way for two electronic devices to communicate with each other simply by being placed in close proximity (0 to 20cm). The chips able to perform this feat are to be built into mobile phones so a phone can be waved close to another device and be able to share information with it.

The information might be a train timetable, news bulletin, music download or anything else a mobile phone can handle,

including financial data. Trials are already underway with Nokia phones equipped with NFC chips and MasterCard PayPass capabilities, in which users are able to pay for goods simply by waving their phone in front of a suitably equipped checkout.

If the system takes off, mobile phones will effectively become digital wallets, enabling shoppers to leave their cash and cards at home, and greatly speed up many everyday transactions.

out, but money received is not automatically transferred to the bank account. It stays in the PayPal account, where it earns no interest until explicitly posted to the bank account, which takes five to seven working days and attracts a service charge of 25p for transfers of under £50.

Because bank and credit card details are revealed solely to PayPal, it's a very secure method of trading on auction sites with people you don't know. However, all that's required to make a payment is a username and password, so it is essential that these remain secret. Fortunately, there is a safeguard against the unauthorised use of accounts because every payment automatically generates an email to the account holder confirming the transaction. If you receive one of these and you haven't made the payment, you know your account has been compromised. There are no guarantees, but PayPal says it does not typically hold users liable for transactions they have not approved.

Outside the UK, BidPay is a popular alternative to PayPal, especially in countries where PayPal does not operate. Unlike PayPal, which can be used to transfer money between two parties for any reason, BidPay may be used only for purchases from approved online trading sites such as eBay, Yahoo! and Amazon. Sellers must have a US bank account, which means that if you live in the UK you'll be interested in BidPay only as a means of paying for items you've bought from international sites. When you click on the BidPay option, you are taken to the BidPay site where, after a simple registration process, you can pay using MasterCard or Visa credit cards.

TRANSACTIONS BETWEEN INDIVIDUALS

There are several online payment services for transferring funds between individuals. One of the well-established UK contenders is Nochex (www.nochex.co.uk). You can enrol as a merchant trader for a £50 setup fee plus commission, as an ordinary seller who pays commission only, or as a private account holder

who can send money free of charge or receive it by paying commission.

Up to two cards (one debit and one credit) can be registered, and if you intend to receive as well as send payments you also need to register a bank account. Money is transferred between Nochex accounts, so you never need to reveal your card numbers, but there are strict limitations on the use of personal accounts. The maximum amount you can load into a Nochex personal account and transfer in a single transaction is £300, and the maximum holding of funds in a Nochex account is £90.

The commission charge for receiving money is 2.9 per cent plus 20p per transaction. Transferring Nochex funds to a current account costs 25p, or is free if the amount is £50 or more. These rates compare favourably with PayPal's charges.

Egg Pay (<http://new.egg.com>) is less versatile than PayPal and Nochex. Unlike those two payment options, it is used solely for person-to-person transfers and cannot be used to buy goods from internet merchants. But it is free to operate and actually pays interest (currently 2.5 per cent AER) on funds held on deposit. To send money, you register for Egg Pay and open an account, which is best done in advance because it can take several hours for an account to become active. Money can be transferred into the account from a debit card, by transfer from another Egg account or by completing a direct debit mandate.

To send money to somebody else, you log on to Egg Pay and supply the email address of the recipient, with whom you have previously agreed a password and security question. The recipient receives an email from Egg telling them about the transfer and, provided they know the password and can answer the security question, the sum you have allocated is transferred to a bank account of their choice.

ESCROW PROTECTION

The emphasis in online transactions is usually on immediacy, but there are occasions when



▲ As a buyer, you can sign up on the spot for PayPal after winning an auction



▲ Egg Pay recipients do not have to sign up to the service to get their hands on their money



▲ In addition to conducting escrow transaction, users of PPPay can also make instant payments in sterling or euros

what matters more to buyers and sellers is that they are protected against loss. This is especially true when high-value goods are being bartered between people who do not know each other. In these situations, escrow payments are useful. This is where a third party holds the money until the buyer indicates that the goods have been received in good condition, and only then are funds released to the seller. If the buyer does not accept the goods, they must be returned to the seller using a trackable form of shipping before the buyer can retrieve the money held in escrow.

The UK leader in this field is Auctionchex (<http://auctionchex.com>), which charges 2.5 per cent for its services and is registered by the Office of Fair Trading and HM Revenue and Customs. There are no other charges provided payments are made by bank transfer or personal cheque. An alternative escrow service is offered by PPPay (www.pppay.com), a company certified by the Financial Services Authority (FSA). In addition to person-to-person payments similar to those offered by Nochex and PayPal, PPPay also brokers escrow transactions for a fixed fee of only 99p. However, both buyer and seller are charged for making and receiving credit card payments, and the recipient is also charged one per cent to move funds from a PPPay account into an ordinary bank account.

INTERMEDIARY SERVICES

Most merchant traders prefer direct payments by debit or credit card, but some will also accept payments from schemes such as PayPal and Nochex. Large, well-established companies are likely to process credit card payments through their own secure servers, but a popular



▲ Some Click and Buy merchants offer incentives for using the system, such as free downloads or free sports betting

alternative for smaller businesses is to divert buyers to a shared secure server operated by a company such as WorldPay (www.worldpay.com), which is part of the Royal Bank of Scotland Group.

WorldPay processes payments on behalf of its customers and handles currency conversions. For buyers, the experience of being diverted to WorldPay from the trader's own site is initially unsettling but the payment process is legitimate, costs the buyer nothing and does not require any sign-up or verification procedures.

If all you want is a secure method of paying bills, check out the BillPay service operated by Alliance and Leicester (www.billpayment.co.uk). Bills from a large number of councils, water authorities and housing associations can be paid online using any UK debit card and certain credit cards as well. Payments take four days to process and you do not need to be a customer of Alliance and Leicester.

A rather different type of payment service is Click and Buy (www.clickandbuy.com). It is designed primarily to pay for goods and services that are delivered online, such as iTunes and software downloads or mobile phone services. Click and Buy has 7,000 merchant traders and 8½ million members. Payment for the services you buy is settled once a month by a deduction from a credit or debit card, by direct debit from a bank account or through your BT phone bill.

DIGITAL WALLETS

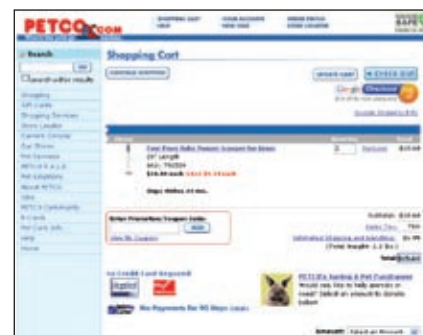
The Digital Wallet format was agreed back in 1999 between major players in the financial and computing worlds including IBM, MasterCard

and Microsoft. A protocol called the Electronic Commerce Modelling Language (ECML) was evolved, but despite efforts by IBM (Consumer Wallet), Microsoft (MSN Wallet), Yahoo! (Yahoo Wallet) and others, it has never taken off and become popular.

Its name suggests it is a store of 'banked' electronic credit that can be drawn upon to pay for goods and services, but it actually stores details of payment cards held by a user, together with a shipping address and other personal information such as might be required by an online merchant. Users of digital wallets do not have to reveal their card numbers to a vendor, and the wallet saves tedious form-filling by automatically providing a shipping address.

Despite the public's historical disinterest in digital wallets, the introduction of Google Checkout (<https://checkout.google.com>) might well change all this. Once you've registered your preferred payment card and delivery details with Google, you can shop with any trader offering Google Checkout and you won't have to reveal your credit card number or even your email address, and your delivery details will be passed on automatically.

The service is free to use, and offers a centralised means of tracking all online purchases through a Purchase History option that appears on the Google Account page after you have signed up. Initially, the scheme was aimed only at users in the US, but a transfer to the UK was announced as this article went to press. Since it was possible for Google account holders in the UK to register in advance for Google Checkout, it is likely that take-up of the service will be swift. **CS**



▲ In countries where Google Checkout operates, you can fast-track the payment process by clicking the Google Checkout button instead of the standard one

Play it safe Precautions when buying online

Don't let concerns about security hold you back from shopping online. Although there is no such thing as a cast-iron guarantee that your financial identity won't be stolen – we hear with monotonous regularity about financial institutions whose staff take home notebooks containing all their clients' details and then leave them in the pub – this isn't unique to internet trading or making online payments. Your details are just as much at risk if you have given them in person or over the phone. It could be argued that making an online payment via a secure server involves less risk than handing over your credit card to a waiter in a restaurant.

Even safer are the many dedicated systems for making online payments where a buyer's financial details are not shared with the seller at all, but handled by an intermediary. To stay safe online, keep these points in mind:

- Only deal with reputable suppliers, preferably ones you know or who have been recommended to you. If you wish to buy from an unknown supplier, at least make sure the company is VAT registered and that its site discloses a landline telephone number and street address.
- Only shop on secure sites displaying a locked padlock security icon in the bottom right of

the browser window and look for 'https' at the beginning of the checkout URL.

- Double-click the security icon to check the security certificate, making sure the website identity on the certificate matches the URL in the address bar.
- Print a copy of your order and keep safe any email notifications you receive about the purchase.
- Never supply your PIN to any internet website, not even that of your bank.
- Check your bank and credit card statements as soon as you receive them and if there are any suspicious transactions, report them at once.